**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. – 27. (cancelled)

28. (currently amended) A method of generating defects in a lattice structure of a semiconductor material during thermal treatment of the material, said method including the steps of:

subjecting said semiconductor material comprising foreign atoms to a treatment protocol comprising a single step process during which there occurs the action of controlling at least one of a concentration and a distribution of defects or vacancies as a function of a process gas atmosphere such that the subsequent concentration and diffusion of foreign atoms within said semiconductor material are influenced by the newly created respective concentration or distribution of defects or vacancies in said semiconductor material; and

the contemporaneous action of either producing an $Si_xO_yN_z$ oxy-nitride layer having a thickness of up to 2nm (20 angstroms) directly on a surface of said semiconductor material, or

producing an $Si_3N_4$ layer having a thickness of up to 4nm (40 angstroms) directly on said semiconductor material at a location on said surface of said semiconductor material at which a natural $SiO_2$ layer has previously been removed prior to the thermal treatment of said semiconductor material.

29. (original) A method according to claim 28, wherein said defects are vacancies.

30. (original) A method according to claim 28, wherein said defects are semiconductor substrate atoms on interstitial lattice positions.

31. (original) A method according to claim 28, wherein a composition of the process gas is controlled.

32. (original) A method according to claim 28, wherein a concentration of a process gas or of process gas components is controlled.

33. (original) A method according to claim 28, wherein a partial pressure of a process gas is controlled.

34. (original) A method according to claim 28, wherein a process gas includes a nitrogen-containing gas.

35. (original) A method according to claim 34, wherein said process gas includes at least one of $NH_3$ and $N_2$.

36. (original) A method according to claim 28, wherein a process gas contains no oxygen.

37. (original) A method according to claim 28, wherein a process gas includes an oxygen-containing component.

38. (original) A method according to claim 37, wherein said oxygen-containing component includes at least one of $N_2O$, NO, and $H_2O$.

39. (original) A method according to claim 28, wherein a temperature behavior of a thermal treatment is controlled in terms of time.

40. (original) A method according to claim 28, wherein said process

gas atmosphere contains argon.

41. (original) A method according to claim 35, wherein said process gas includes $NH_3$ having a concentration of 0 to 10,000ppm.

42. (original) A method according to claim 41, wherein said $NH_3$ concentration is 2500 to 5,000ppm.

43. (currently amended) A method according to claim 28, which includes reducing thermal stressing of ~~a~~ the semiconductor wafer.

44. (original) A method according to claim 28, wherein a distribution of foreign atoms within semiconductor material is controlled by means of distribution of said defects.

45. (original) A method according to claim 44, wherein said foreign atoms include at least one of the elements of the group consisting of boron, phosphorus, As, Sb and In.

46. (original) A method according to claim 28, wherein said method is carried out on a semiconductor doped with foreign atoms.

47. (original) A method according to claim 28, wherein said method is carried out on a semiconductor that is to be doped.

48. (original) A method according to claim 47, wherein said semiconductor is doped.

49. (currently amended) A method according to claim 48 ~~28~~, wherein doping into said semiconductor is effected by means of at least one of gas phase doping, implantation, and diffusion by out-diffusion from a layer that is in contact with said semiconductor.

50. (currently amended) A method of generating defects in a lattice structure of a semiconductor material during thermal treatment of the material, said method including the steps of:

subjecting said semiconductor material comprising foreign atoms to a treatment protocol comprising a single step process during which there occurs the action of controlling at least one of a concentration and a distribution of defects or vacancies in the form of a selected one of vacancies (empty lattice positions) and semiconductor-substrate atoms on interstitial lattice positions (self-interstitials) as a function of a process gas atmosphere such that the subsequent concentration and diffusion of foreign atoms within said semiconductor material are influenced by the newly created respective concentration or distribution of defects or vacancies in said semiconductor material; and

the contemporaneous action of either producing an $Si_xO_yN_z$ oxy-nitride layer having a thickness of up to 2nm (20 angstroms) directly on a surface of said semiconductor material, or

producing an $Si_3N_4$ layer having a thickness of up to 4nm (40 angstroms) directly on said semiconductor material at a location on said surface of said semiconductor material at which a natural $SiO_2$ layer has previously been removed prior to the thermal treatment of said semiconductor material.

51. (new) A method of generating defects in a lattice structure of a semiconductor material during thermal treatment of the material, said method including the steps of:

subjecting said semiconductor material comprising foreign atoms including at

least one of the elements of the group consisting of boron, phosphorus, As, Sb and In to a treatment protocol comprising a single step process during which there occurs the action of controlling a distribution of defects or vacancies as a function of a process gas atmosphere such that the subsequent concentration and diffusion of foreign atoms within said semiconductor material are influenced by the newly created respective concentration or distribution of defects or vacancies in said semiconductor material; and

the contemporaneous action of either producing an $Si_xO_yN_z$ oxy-nitride layer having a thickness of up to 2nm (20 angstroms) directly on a surface of said semiconductor material, or

producing an $Si_3N_4$ layer having a thickness of up to 4nm (40 angstroms) directly on said semiconductor material at a location on said surface of said semiconductor material at which a natural $SiO_2$ layer has previously been removed prior to the thermal treatment of said semiconductor material.

52. (new) A method of generating defects in a lattice structure of a semiconductor material during thermal treatment of the material, said method including the steps of:

subjecting a semiconductor material that is to be doped and comprising foreign atoms to a treatment protocol comprising a single step process during which there occurs the action of controlling at least one of a concentration and a distribution of defects or vacancies as a function of a process gas atmosphere such that the subsequent concentration and diffusion of foreign atoms within said semiconductor material are influenced by the newly created respective concentration or distribution of defects or vacancies in said semiconductor material; and

the contemporaneous action of either producing an $Si_xO_yN_z$ oxy-nitride layer having a thickness of up to 2nm (20 angstroms) directly on a surface of said semiconductor material, or

producing an $Si_3N_4$ layer having a thickness of up to 4nm (40 angstroms) directly on said semiconductor material at a location on said surface of said semiconductor material at which a natural $SiO_2$ layer has previously been removed prior to the thermal treatment of said semiconductor material.